

Summary

Claims 1-6 were pending. Claims 1 and 3 have been amended, Claim 2 cancelled and Claims 7-20 added.

Claim Rejections

Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as being anticipated by Sakai (U.S. Patent 5,966,052) and Claims 3-6 were rejected as being unpatentable over Sakai in view of Fujiwuru (U.S. Patent 5,660,269).

Applicant has rewritten Claim 1 and submits that Claim 1 is patentable over the cited references. In addition, Applicant traverses the rejection of Claim 3.

Claim 1 recites that the connecting conductor contains multiple bends between the electric part and the side electrode. None of the cited references anticipate or suggest such an arrangement.

Nor do any of the cited references anticipate or suggest the specific arrangements of Claims 7-10, which all reduce the temperature of the solder attaching the electric part to the wiring pattern and/or decrease flux flow from propagating in the connecting conductor from the side electrode to the solder.

Claim 3 recites that a layer fabricated by silk screen printing is formed on the connecting conductor between the electric part and the side electrode so as to cross the connecting conductor. Applicant respectfully traverses the rejections, as a *prima facie* case of obviousness has not been made. Applicant has amended Claim 3 for grammatical reasons only.

To establish a *prima facie* case of obviousness, 1) there must be some suggestion or motivation to modify the teachings of the references; 2) there must be some expectation of success, and 3) the references must teach all of the claimed limitations.

Sakai is directed to a voltage-controlled oscillator (VCO) with a reduced number of through holes in the motherboard and a sufficient gap between input and output terminals to prevent interference between these terminals and thus increase the C/N characteristics.

Fujiwuru, on the other hand, is directed to a reliable button-type switch with reduced surface area in which switching occurs even when pressure on the key is local and nonuniform.

As is apparent, a VCO and a button-type switch are completely disparate technologies. A VCO is an oscillator that can be continuously tuned across a particular frequency band and is used, for example, in phase-locked loops. A button-type switch is used in a keyboard, for example. The VCO and button-type switch are completely unrelated in their field of endeavor.

Nor does either reference provide any motivation or suggestion for modifying the structure in that reference to incorporate the elements of the other structure. Sakai wants to reduce the number of through holes in a motherboard and prevent interference between input and output terminals, while Fujiwuru wants to ensure switching in miniature button-type switches. Of course, as noted in the MPEP, the mere fact that references can be combined is not sufficient to establish a *prima facie* case of obviousness. (See MPEP 2142).

Even if some motivation existed, Fujiwuru (the reference cited as anticipating the layer fabricated by silk screen printing) does not anticipate or suggest an arrangement similar to that of Claim 3, in which the layer specifically crosses a connecting conductor that connects an electric part and a side electrode. Fujiwuru, in fact, specifically teaches that the reason why the silk layer 207 is formed is for enhancing luminous efficiency of light emitting elements placed for a back light (col. 2, lines 42-44). No light emitting elements are present in the VCO of Sakai. Nor can a silk layer be formed on the connecting conductor between the electric part and the side electrode, as recited in Claim 3, to aid in luminous efficiency. Moreover, nowhere does Fujiwuru anticipate or suggest a layer formed by silk screening that crosses the connecting conductor.

Thus, no suggestion or motivation to modify the teachings of the references is present, there is no indication that the VCO and button-type switch of the references can be successfully combined, and, even if successfully combined, the references do not teach all of the limitations present in Claim 3. For at least these reasons, Claim 3 is patentable over the cited references.

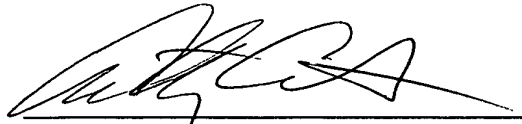
For reasons similar to those above of Claims 7-10, Claims 11-14 are independently patentable over the cited references.

In addition, for reasons similar to all of the preceding, Claims 15-20 are independently patentable over the cited references.

Conclusion

Applicant respectfully submits that the application is in condition for allowance. The Examiner is respectfully requested to contact the undersigned in the event that a telephone interview would expedite consideration of the application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Anthony P. Curtis', written over a horizontal line.

Anthony P. Curtis, Ph.D.
Registration No. 46,193
Agent for Applicant

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, ILLINOIS 60610
(312) 321-4200